

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:  
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ATY-INSTA RE WO.: 10/6/05  
ATY-RESPONSE REWO.: 10/13/05

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL PRELIMINARY  
EXAMINING AUTHORITY

(PCT Rule 66)

Date of mailing  
(day/month/year)

**13 SEP 2005**

Applicant's or agent's file reference

30794108WO01

**REPLY DUE**

within 1 months/days from  
the above date of mailing

International application No.

PCT/US03/39211

International filing date (day/month/year)

09 December 2003 (09.12.2003)

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): H01L 21/465, 29/06, 29/20, 33/00 and US Cl.: 257/98, 103; 438/43, 47

Applicant

FUJII ET AL.

**RECEIVED**

SEP 16 2005

1. ☒ The written opinion established by the International Searching Authority:

☒ is ☐ is not

considered to be a written opinion of the International Preliminary Examining Authority.

**Gates & Cooper LLP**

2. This second (first, etc.) opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

**When?** See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(e).~~

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.  
For an informal communication with the examiner, see Rule 66.6.  
For an additional opportunity to submit amendments, see Rule 66.4.

**If no reply is filed**, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary report on patentability (Chapter II of the PCT) must be established according to Rule 69.2 is: 09 April 2006 (09.04.2006)

Name and mailing address of the IPEA/ US

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Commissioner for Patents  
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**WRITTEN OPINION OF THE  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY**

International application No.

PCT/US03/39211

**Box No. I Basis of the opinion**

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This opinion is based on a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this opinion has been established on the basis of (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."*):

- ☐ the international application as originally filed/furnished
- ☒ the description:  
 pages 1-15 \_\_\_\_\_ as originally filed/furnished  
 pages NONE \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages NONE \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:  
 pages NONE \_\_\_\_\_ as originally filed/furnished  
 pages NONE \_\_\_\_\_ as amended (together with any statement) under Article 19  
 pages 16-18 \_\_\_\_\_ received by this Authority on 23 May 2005 (23.05.2005)  
 pages NONE \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:  
 pages 1/10-10/10 \_\_\_\_\_ as originally filed/furnished  
 pages NONE \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages NONE \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

WRITTEN OPINION OF THE  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

International application No.  
PCT/US03/39211

Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>NONE</u>	YES
	Claims <u>1-18</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-18</u>	NO
Industrial Applicability (IA)	Claims <u>1-18</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and Explanations:

Claims 1-18 lack novelty under PCT Article 33(2) as being anticipated by Sugiyama et al.

See figure 5B of Sugiyama where the N-face of a GaN based led is roughened into cone-shaped projections to improve the light emission properties of the device. The cones are also produced by etching. Claims 1-18 are anticipated by Sugiyama.

----- NEW CITATIONS -----

US 2003/0178626 A1 (Sugiyama et al) 25 September 2003, see figures 5 and 6.

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**WRITTEN OPINION OF THE  
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**International application No.  
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**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient.)

**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.